CALPINE

Los Esteros Critical Energy Facility
800 Thomas Foon Chew Way
San Jose, CA 95134

August 27, 2004

Mr. Dennis Jang, Engineer
Permit Services Division
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

RE: Request for Amendment to Major Facility Review Permit, Facility #B3289
Los Esteros Critical Energy Facility
Permit to Operate No. 3213, Plant No. 13289

Dear Mr. Jang:

The Los Esteros Critical Energy Facility (LECEF) would like to request amendments to the LECEF Major Facility Review Permit, Facility #B3289 and BAAQMD Permit to Operate No. 3213. The purpose of this request is to formalize previous communications with the District and ask that the following administrative changes be incorporated in the BAAQMD and Title V permits:

1. Page 27: Permit Conditions: Condition 27. Amend Condition 27 to allow for the use of a calculation based on the total sulfur levels in the fuel to demonstrate compliance with SAM emission limits in Condition 23. The method for measuring sulfuric acid mist would not result in a detection limit low enough to prove compliance with the emission limits. Based on the current sulfur content of the facility's natural gas and assuming 100% conversion of sulfur to SAM, it is impossible to emit 7 tpy. We are currently submitting calculations based on the fuel gas sulfur to comply with this condition. As long as we are in compliance with our fuel gas sulfur limit listed in Condition 24b, the limits in Condition 23 cannot be exceeded. Therefore, we would like Condition 27 to read as follows:

> Within 60 days of start-up of the LECEF the owner/operator shall demonstrate compliance with the SAM levels in Condition number 23 using the calculation method based on total sulfur levels in the fuel and a speciation based on the EPA guidance document "Emergency Planning and Community Right To Know Act – Section 313-Guidance for Reporting Sulfuric Acid". The calculation method and the most recent fuel analysis are attached.

2. Page 27: Permit Conditions: Condition 29. Delete condition. 40 CFR Part 60 Subpart GG was revised July 14, 2004 and no longer requires daily or periodic fuel gas sulfur monitoring if the fuel meets the definitions of natural gas (20 grains sulfur per 100 scf and either > 70% methane or between 950 and 1100 Btu/scf). The fuel supplier (PG&E) transportation contract limits gas to 1 grain per 100 scf, and the gas heating value was verified as part of the CEMS certification report. The following comments were originally submitted via e-mail on February 6, 2004 in response to the draft Title V permit:

3. Page 5: Monitoring Reports. This condition requires the submittal of a semi-annual monitoring report to the District and condition 34 requires the submittal of a similar report quarterly. We request that these reporting requirements be combined by either eliminating the need to submit the semi-annual or quarterly reports.

4. Page 6 & 8: Miscellaneous Conditions and Table II-A. The turbine capacities shown in Table II-A are listed as 45 MW. As noted in the ATC and FDOC documents, 45 MW is the nominal output for these turbines. The turbine capacities shown in Table II-A should be revised to 49.9 MW, or, reference to the load should be moved to the Description column in the table (i.e., the description of S-1 would be: "Gas Turbine Generator, Natural Gas fired with water injection, nominally 45 MW").

The heat input capacities shown in Table II-A are listed as 472.6 MMBtu/hr. Under certain operating conditions, the LM6000 could potentially exceed this rate. The heat input capacity should be revised to 500 MMBtu/hr in this table and elsewhere in the document. This change does not affect the emission limits or annual heat input limits established in the permit.

5. Page 6: Accidental Release. Delete condition. 40 CFR Part 68 is not applicable since the facility uses a 19% aqueous ammonia solution, which is less than the threshold of 20%.

6. Pages 20-23: Permit Conditions: Conditions 1-11. Conditions 1 through 11 are valid during the commissioning period. Because the facility commissioning has been completed, these conditions can be deleted from the permit.

7. Page 24: Permit Conditions: Condition 19(b). Based on prior discussions with District staff, compliance with the ammonia slip limit may be demonstrated by calculating the slip based on the inlet NOx concentration, stack NOx concentration, total heat input and ammonia injection rate. This calculation will be adjusted using a correction factor that is determined during any required source test. We suggest that the condition be revised to:

> Ammonia emissions from the gas turbine shall not exceed 10 ppmv @ 15% O2 (3-hour rolling average), except during periods of startup and shutdown as defined in this permit. The ammonia emission concentration shall be verified by a District approved corrected ammonia slip calculation. The correction factor shall be determined during any required source test. (basis: BACT)

8. Page 24: Permit Conditions: Condition 19(d). POC emissions are not monitored. Delete reference to 3-hour rolling average from the condition.

9. Page 25: Permit Conditions: Condition 22. POC limit of 114 lbs/day is inconsistent with the 113 lbs/day in the PTO. Limits should be revised to be consistent.

10. Page 26: Permit Conditions: Condition 24(a). Heat input limit should be revised to 12,000 MMBtu/day to be consistent with the hourly maximum heat input limit of 500 MMBtu/hr. This change does not affect the emission limits or annual heat input limits established in the permit.

11. Page 26: Permit Conditions: Condition 24(b). This condition limits the natural gas total sulfur content to 0.25 gr/100 scf. Because our gas supplier cannot guarantee meeting this limit, we request revising the limit to 1.0 gr/100 scf. This limit is consistent with those required at other facilities in the district. This change does not affect the SO2 emission limits in this permit.

12. Page 26: Permit Conditions: Condition 26. This condition requires a source test to be conducted annually. Because this facility does not operate continuously, we request that the source test frequency be revised to every 8,000 operating hours.

This condition requires the source test results to be submitted to the District within 30 days after completion of the tests. We request that this deadline be extended to 60 days after completion of the tests. Past experience has indicated that source test vendors generally require more than 30 days to complete their analyses and provide the final reports.

This condition requires that PM10 testing shall be conducted in accordance with ARB Test Method 5. We request that EPA Test Method 201 and 202 be used instead.

We request that the SOx source test requirements be clarified such that data can be obtained via calculation rather than stack test.

Incorporating the changes referenced above, we suggest that the condition be revised to:

> Source Testing/RATA: Within sixty days after startup of the gas turbines, and at a minimum on an annual basis thereafter, the owner/operator shall perform a relative accuracy test audit (RATA) on the CEMS in accordance with 40 CFR Part 60 Appendix B Performance Specifications. A source test shall be performed at least every 8,000 hours of gas turbine operation. Additional source testing may be required at the discretion of the District to address or ascertain compliance with the requirements of this permit. The written test results of the source tests shall be provided to the District within sixty days after testing. A complete test protocol shall be submitted to the District no later than 30 days prior to testing, and notification to the District at least ten days prior to the actual date of testing shall be provided so that a District observer may be present. The source test protocol shall comply with the following: measurements of NOx, CO, POC, and stack gas oxygen content shall be conducted in accordance with ARB Test Method 100; measurements of PM_{10} shall be conducted in accordance with EPA Test Methods 201 and 202; and measurements of ammonia shall be conducted in accordance with Bay Area Air Quality Management District test method ST-1B. Alternative test methods, and source testing scope, may also be used to address the source testing requirements of the permit if approved in advance by the District. The initial and annual source tests shall include those parameters specified in the approved test protocol, and shall at a minimum include the following:

a. NOx– ppmvd at 15% O2 and LB/MMBtu (as NO2);
b. Ammonia – ppmvd at 15% O2 (Exhaust);
c. CO – ppmvd at 15% O2 and LB/MMBtu (Exhaust);
d. POC – ppmvd at 15% O2 and LB/MMBtu (Exhaust);
e. PM_{10} – LB/hr (Exhaust);
f. SOx – LB/hr (Exhaust);
g. Natural gas consumption, fuel High Heating Value (HHV), and total fuel sulfur content;
h. Turbine load in megawatts;
i. Stack gas flow rate (SDCFM) calculated according to procedures in U.S. EPA Method 19.
j. Exhaust gas temperature (°F)
k. Ammonia injection rate (LB/hr or moles/hr)
l. Water injection rate for each turbine at S-1, S-2, S-3, & S-4 (Basis: source test requirements and monitoring)

13. Page 27: Permit Conditions: Condition 27. Delete condition. This condition requires semi-annual testing for sulfuric acid mist (SAM) to verify compliance with the combined (S-1 through S-4) emission limit of 7 tpy. Based on current sulfur content of natural gas and assuming 100% conversion of sulfur to SAM, it is impossible to emit 7 tpy.

14. Page 29: Permit Conditions: Condition 35. Delete condition. Offsets have already been provided.

15. Page 46 (and cover page): Acid Rain Permit. The plant site location, mailing address, and contact person should be changed to:

Location:	800 Thomas Foon Chew Way San Jose, CA 95134
Mailing Address:	3800 Cisco Way San Jose, CA 95134
Contact Person:	Dana Petrin (408) 592-7915

We have enclosed a check in the amount of $332.00, which includes the $259.00 filing fee and $73.00 administrative amendment fee per Schedule P. Should you have any questions or require further information regarding the requested amendments, please contact me at (408) 592-7915.

Sincerely,

Dana Petrin
Compliance Manager
South Bay Projects

cc: David Williams
Barbara McBride
Scott Vickers
Bob McCaffrey
Charlie Hoock
Mark Breen
Environmental File (Janet McCarthy) LECEF A3.1